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TITLE: SEMICONDUCTOR DEVICE AND ITS MANUFACTURE

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INVENTOR-INFORMATION:

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INT-CL (IPC): H01L 21/768; H01L 21/316; H01L 21/318

ABSTRACT:

PROBLEM TO BE SOLVED: To provide a semiconductor device which can suppress impurity diffusion and infiltration of water or hydroxyl ions for improving its reliability.

SOLUTION: Formed on an element isolation insulating film 11 is a wiring layer 20 of a plurality of first metal wiring lines. Formed on the insulating film 11 and the first metallic wiring layer 20 are a silicon oxide film 31 added in high concentration of fluorine, a silicon nitride film 32 and an SiO₂ film 33. The SiO₂ film 33 higher in relative permittivity than the SiOF film 31 but lower than that of the silicon nitride film 32. Formed, in the SiOF film 31, silicon nitride film 32 and SiO₂ film 33 is a via hole for connection with the first wiring layer 20. A W plug material 41 is embedded in the via hole. A second metal wiring layer 50 is formed on the SiO₂ film 33.

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